

I claim:

1. A method of calibrating a radio having a frequency source which produces a first signal having a first frequency by multiplying a second signal having an original frequency by a multiplier value, the method comprising:

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- a) determining the original frequency
  - b) utilizing the original frequency to determine a corrected multiplier value
  - c) producing an output signal having an output frequency approximately equal to a desired frequency by adjusting the multiplier value to the corrected multiplier value

2. A method as claimed in claim 1 wherein step a) further includes the steps of:

- a1) measuring the first frequency
- a2) dividing the first frequency by the multiplier value to obtain the original frequency.

3. A method as claimed in claim 1 wherein step b) further includes the steps of dividing the desired frequency by the original frequency to obtain the corrected multiplier value.

4. A method as claimed in claim 1 further including

the step of storing the original frequency in storage means.

5. A method as in claim 1 wherein the frequency source is a high resolution frequency synthesizer.

6. A method as in claim 5 wherein the second signal is provided by a crystal oscillating at the original frequency.

7. A method of adjusting an output frequency of a signal produced by a frequency source, said frequency source producing the signal by multiplying an input signal having an original frequency by a multiplier value, the method comprising:

- aa) measuring a preliminary frequency of the signal
- ab) adjusting the multiplier value based on a desired frequency and a measurement of the preliminary frequency to produce a corrected multiplier value
- ac) outputting a signal having an intermediate frequency based on the corrected multiplier value
- ad) repeating steps aa) to ac) to obtain a final signal with a final frequency such that a difference between the final frequency and the desired frequency is a minimum.

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8. A method as claimed in claim 7 wherein step ab) further includes a step chosen from the group comprising:

- ab1) incrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is lesser than the desired frequency
- ab2) decrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is greater than the desired frequency
- ab3) utilizing the multiplier value as the corrected multiplier value if the preliminary frequency is approximately equal to the desired frequency.

9. A method as claimed in claim 7 further including the step of obtaining the original frequency by dividing the final frequency by the corrected multiplier value.

10. A method as claimed in claim 9 further including the step of storing the value of the original frequency in a storage means.

11. A device for adjusting an output frequency of a signal produced by a frequency source, the device comprising:

- a frequency source which produces the signal by multiplying:
  - an input signal having an input frequency and
  - a multiplier having a value
- a controller coupled to the frequency source, said controller controlling the value of the multiplier
- a frequency measurement device coupled to the frequency source, said frequency measurement device producing measurement data relating to the output frequency of the signal

wherein the controller is coupled to receive the measurement data produced by the frequency measurement device.

11. A device as claimed in claim 10 wherein the frequency source is chosen from the group comprising:

- a high resolution frequency synthesizer
- a radio

12. A device as claimed in claim 10 wherein the controller is chosen from the group comprising:

- a general purpose microprocessor
- a microcontroller
- a general purpose personal computer

13. A device as claimed in claim 10 wherein the frequency source, the controller, and the frequency

measurement device are implemented on a single application specific integrated circuit.

14.<sup>a</sup> A device as claimed in claim 10 further including storage means for storing the input frequency.

15.<sup>b</sup> A device as claimed in claim 10 wherein the frequency measurement device measures the output frequency of the signal.

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